DOCUMENT RESUME

ED 300 692 CG 021 187

AUTHOR	Hostetler, Joyce
TITLE	Adolescents and Substance Abuse: An Overview. Adolescent Alcoholism: Recognizing, Intervening, and Treating Series No. 1.
INSTITUTION	Ohio State Univ., Columbus. Dept. of Family Medicine.
SPONS AGENCY	Health Resources and Services Administration (DHHS/PHS), Rockville, MD. Bureau of Health Professions.
PUB DATE	87
CONTRACT	240-83-0094
NOTE	31p.; For other guides in this series, see CG 021 188-193.
AVAILABLE FROM	Department of Family Medicine, The Ohio State University, Columbus, OH 43210 ($5.00 each, set of seven, $25.00; audiocassette of series, $15.00; set of four videotapes keyed to guides, $165.00 half-inch tape, $225.00 three-quarter inch tape; all orders prepaid).
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051) -- Reports - General (140)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Adolescent Development; Adolescents; *Alcoholism; *Diseases; Drinking; Models; *Physicians; *Substance Abuse; Units of Study

ABSTRACT

This document is one of seven publications contained in a series of materials for physicians on recognizing, intervening with, and treating adolescent alcoholism. The materials in this unit of study are intended to provide a framework for physicians' awareness, to present selected facts and information, to outline current thinking regarding factors involved in teenage alcoholism and substance abuse, and to explain models of alcoholism with emphasis on the disease model of alcoholism. It contains information that will enable the physician to: (1) advocate the importance of pursuing issues related to adolescent alcoholism; (2) describe the problem of teenage alcoholism in terms of prevalence and incidence; (3) explain factors which make dealing with teenage alcoholism difficult; (4) evaluate models regarding their development, evaluation, and efficacy in explaining alcoholism; (5) compare the natural history of alcoholism in adults and in adolescents; (6) define adolescence and list the adolescent's developmental tasks; (7) list factors which influence the adolescent's psychosocial development; and (8) discern in the family system which parameters do or do not contribute to problems of alcoholism and which factors do or do not contribute to regaining a good health status. (NB)

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Adolescent Alcoholism: Recognizing, Intervening, and Treating

(The titles and materials listed below are contained in this series.)

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2. The Physician's Role in Prevention	•	•	
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5. The Physician's Role in Referral and Treatment	•		•
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Faculty Guide (regarding medical education, residency training, and continuing medical education)			•

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Adolescent Alcoholism: Recognizing, Intervening, and Treating

1 Adolescents and Substance Abuse: An Overview

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Contract Number: 240-83-0094

U.S. Department of Health and Human Services
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A special note of appreciation is extended to persons in family practice residency programs and universities throughout Ohio for reviewing the materials and to faculty and residents of the Central Ohio Affiliated Family Practice Residency Programs where the materials were piloted.

Grant Hospital, Columbus, Ohio
Riverside Methodist Hospital, Columbus, Ohio
University Hospital, Columbus, Ohio
Mt. Carmel Hospital, Columbus, Ohio

Composition, Camera Work, Reproduction, and Binding: Lesher Printers, Fremont, Ohio

Library of Congress Catalog Card Number: 86-051058

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Introduction

- According to recent statistics, 14 teenagers die in alcohol-related accidents each day; 300 are injured.
- Current statistics indicate that at least 92.6 percent of all teenagers have experimented with alcohol; 65 percent have used alcohol in the past month.
- Drinking at least once a day is reported by 4.8 percent of high school seniors.
- Alcohol abuse by teenagers cuts across all racial, socioeconomic, and gender barriers.
- For teenagers, the progression from experimenting to problem drinking and severe alcoholism can occur in a matter of months, whereas, with adults, this progression often takes years.
- The use of alcohol by teenagers is often combined with the use of other drugs. Marijuana and alcohol are often the "dynamic duo."
- It is the rare individual who can "kick the habit" alone. Teenagers, once addicted, need the help of parents, siblings, and peers. Teenage alcoholism is a family affair.
- The teenage alcoholic is at risk for the rest of his life.
- Physicians often report that they do not see the problem of teenage alcoholism. It may be that they simply do not recognize the symptoms.

Goal

The problem of teenage alcoholism and substance abuse is not always obvious to physicians. It is the goal of this unit of study to provide a framework for physicians' awareness, to present selected facts and information, to outline current thinking regarding factors involved in teenage alcoholism and substance abuse, and to explain models of alcoholism with emphasis on the disease model of alcoholism.

Objectives

Upon completion of this unit of study, you will be able to:

1. *Advocate the importance of pursuing issues related to adolescent alcoholism.*
2. *Describe the problem of teenage alcoholism in terms of prevalence and incidence.*
3. *Explain factors which make dealing with teenage alcoholism difficult.*
4. *Evaluate models regarding their development, evaluation, and efficacy in explaining alcoholism.*
5. *Compare the natural history of alcoholism in adults and adolescents.*
6. *Define adolescence and list the adolescent's developmental tasks.*
7. *List factors which influence the adolescent's psycho-social development.*
8. *Discern in the family system which parameters do/do not contribute to problems of alcoholism and which factors do/do not contribute to regaining a good-health status.*

The Problem

Alcohol abuse among Americans is recognized as a national health problem affecting persons of all ages, of both sexes, of every socioeconomic status, and of all ethnic backgrounds. For years, we have concerned ourselves with the problem of the adult alcoholic; now we are recognizing that teenagers, too, are often involved harmfully with alcohol. Figure 1-1 indicates the seriousness of the problem, not only related to alcohol but to other drugs as well. Appendices A through F provide additional information regarding the extent of alcohol use by teenagers in relation to other types of drugs.

While alcohol-related diseases, classical symptoms of alcohol dependence, and other adverse consequences of alcohol abuse may not be manifested by teenagers, alcoholism nevertheless presents a severe threat. Adolescence is a time of rapid physiological and behavioral growth. The development of cognitive, social, and physical skills is likely to be disrupted with the potential that that disruption will have lasting consequences.

Typically, physicians have limited contact with teenagers. Office visits by this generally healthy group of individuals usually are limited and are related to such things as sports physicals and occasional acute problems. Under these conditions, to recognize the teenager as having a drug or alcohol problem requires a keen sense of awareness on the part of the physician. Sensitivity to the family situation, the presence of risk factors for alcohol abuse, and the effects of problems on other members of the family often provide first clues to the presence of an alcohol problem. Such sensitivity requires a thorough understanding of the dynamics of teenage alcoholism.

The Physicians' Dilemma

Even though alcoholism is generally considered the No. 3 health problem in the United States and even though the number of teenage alcoholics is increasing dramatically, many physicians have received little education or training in this area. Therefore, limitations exist in most physicians' abilities to identify and treat alcoholism, particularly as it is experienced by teenagers. Indeed the diagnosis of a teenager with an alcohol problem can be very difficult unless a crisis directly related to the abuse problem brings the problem to your attention. In most cases where no crisis is precipitated, the diagnosis must be made through clever detective work linking the problem with family developments, with risk factors, and with other clues which point toward the possibility that a teenager is alcoholic.

Your abilities to treat teenage alcoholics and to work with their families is influenced by more than your previous education. Influences also include your past and current experiences with alcohol and other drugs, as well as your views regarding addiction. For example, some factors which may lead to frustration when you try to help someone who is abusing alcohol are:

- Your upbringing and attitude toward alcohol and the alcoholic
- The rejection of your values or morals by the abuser
- Inadequacies in your training
- The role models you had during training
- Your view of how alcoholics are treated in clinics, emergency rooms, and hospitals
- Your disappointment at the occurrence of relapse and remission
- Your reaction to the general social stigma of alcoholism

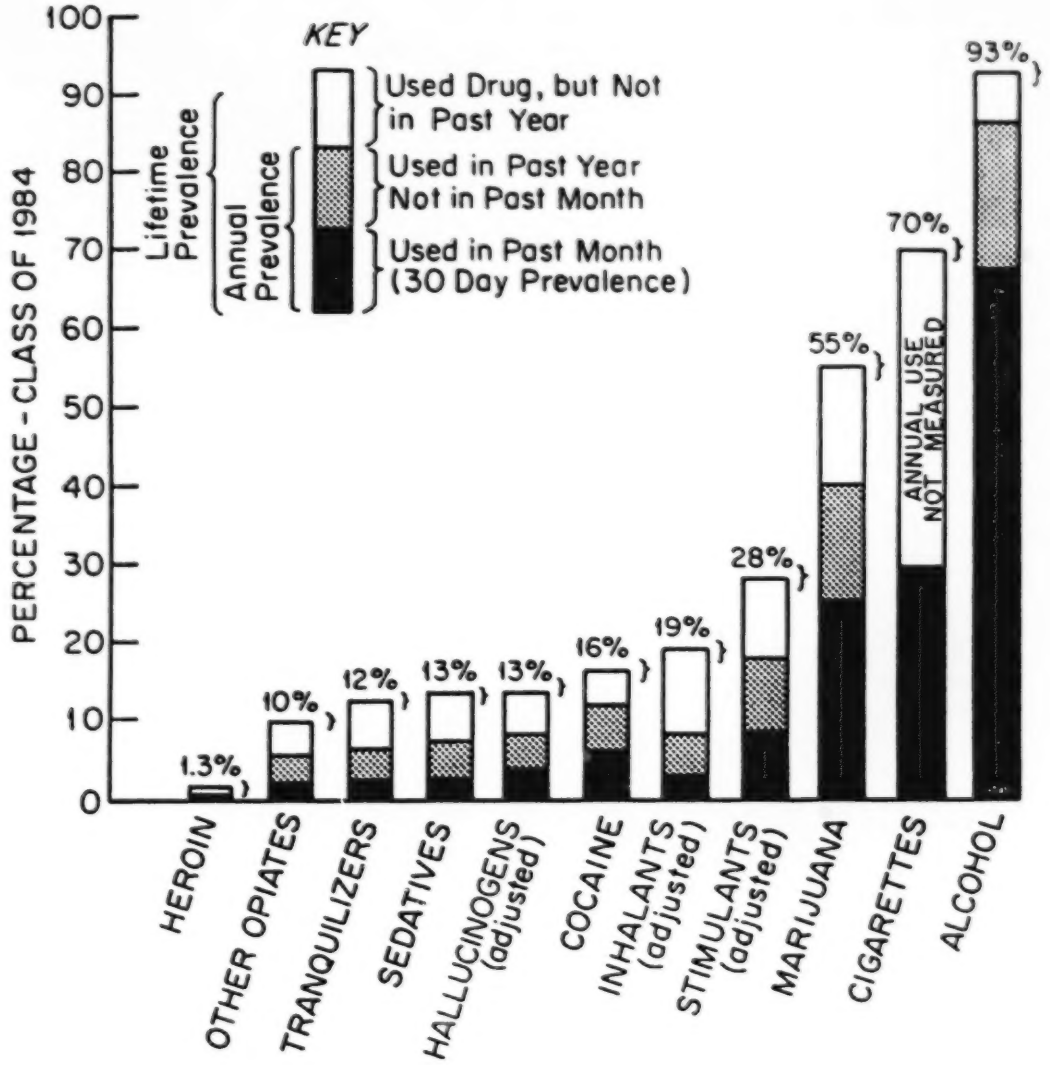
The Physicians' Hope

■ *Alcoholism is a treatable disease.*

This unit of study in general, and the following five in particular, have one purpose; that is, to help you understand that alcoholism, and substance abuse in general, is a treatable disease. But first you must have a positive attitude which enables you to accept the adolescent alcoholic with dignity and respect, seeing him or her as a worthy person capable of returning to health.

When working with adolescents and their parents, you need to be aware of the stages of alcohol abuse and dependency. But there is also much you can do before the youth becomes harmfully involved with alcohol. You can begin by developing rapport with young parents and making yourself available as a resource for all aspects of child rearing. Parenting skills can be taught and educational material provided. Both the adolescent and the parents will feel like they have an advocate if they can feel free to discuss personal problems and issues like boredom, loneliness, rejection, pain, and death, as well as information regarding alcohol and other drugs. Furthermore, you can have a greater influence on the adolescents with whom you interact if you are a healthy role model. This includes honest evaluation and understanding of your own use of alcohol and other chemical substances, including tobacco.

Figure 1-1. Prevalence and Recency of Use of Eleven Types of Drugs



NOTES: The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*. Washington: National Institute on Drug Abuse, 1985, p. 20.

Alcoholism Defined

Even though there are no universally accepted definitions for alcoholism, recent definitions include[1]:

". . . a disease characterized by the repetitive and compulsive ingestion of any sedative drug, ethanol representing but one of this group, in such a way as to result in interference with some aspect of the patient's life, be it health, marital status, career, interpersonal relationships, or other required societal adaptations." Stanley Gitlow, M.D., Director of Alcoholism Treatment Program.

". . . an illness characterized by the preoccupation with alcohol and loss of control over its consumption which usually leads to intoxication if drinking is begun; by chronicity; by progression; and by the tendency toward relapse. Typically associated with physical disability and impaired emotional, occupational, and/or social adjustments as a direct consequence." American Medical Association, 1975.

". . . a chronic, progressive and potentially fatal disease. It is characterized by tolerance and physical dependency, pathologic organ changes, or both, all of which are the direct or indirect consequences of the alcohol ingested." National Council on Alcoholism, 1977.

". . . An alcoholic is a very sick person, victim of an insidious, progressive disease, which all too often ends fatally. An alcoholic can be recognized, diagnosed, and treated successfully." Marty Mann, Founder of the National Council on Alcoholism.

". . . Alcohol Dependence: A pattern of pathological use or impairment in social or occupational functioning due to alcohol use, with symptoms of tolerance or withdrawal." DSM-III, Diagnostic Criteria.

". . . Alcohol-type drug dependence: consumption of alcohol exceeds the limits accepted by his culture, if he consumes alcohol, at times that are inappropriate . . . or he injures his health or social relationships." World Health Organization.

Models of Alcoholism

Physicians and lay people alike use different models to explain alcoholism. Some of these are:

Moral:	Alcohol intake is a moral failing. Abusing alcohol is seen as a weakness, a sin.
Psychoanalytic:	Alcoholism is an incurable disease.
Learned Behavior:	Environmental conditioning or operant influence produces aberrant behavior.
Medical:	Serious fatal illness.
Social Rebellion:	Alcohol abuse is a result of a person rejecting all authority.
Symptom Relief:	The individual ingests alcohol to relieve unpleasant conditions (anxiety, depression, and mental or physical pain).
Disease:	Alcoholism is an illness that makes the person sick; the afflicted person cannot control the symptoms.
Addiction:	With continued intake of alcohol, increased and more frequent doses may be desired. Eventually, the person feels ill, or abnormal, if he does not ingest alcohol.
Genetic:	Some people have a predisposition toward alcoholism. This hypothesis is supported in that males with alcoholic fathers have 4-5 times greater rates of alcoholism than the general population.[2] Goodwin studied adopted children and found that the incidence of alcoholism among the sons of alcoholic men was four times greater than the control group, even when the sons were raised by foster parents.[3] These studies were ambiguous for daughters of alcoholics.

The Disease Model of Alcoholism

It was only in the mid to late 1950's that the disease model of alcoholism became widely accepted.

In the past, the alcoholic was described as a drunkard, intemperate, and feeble-minded. During the 18th century, Benjamin Rush in the United States and Thomas Trotter in England were the first to describe alcoholism as a disease. The general public and most physicians continued to view alcohol abuse as a weakness or a moral problem. As late as the 1920's, the American Medical Association stated that alcoholism was not a disease and

physicians should not treat alcoholics. However, the concept of alcoholism as a disease slowly became more acceptable after Alcoholics Anonymous was established in 1935 and an increasing number of alcoholics successfully controlled their alcoholism. Advances in the study and treatment of alcoholism as a disease continued to gain momentum with the founding of the National Council on Alcoholism in 1945 and with the declaration that alcoholism is to be considered a disease, first by the World Health Organization in 1951 and finally by the American Medical Association in 1956. Then in 1960, Dr. E.M. Jellinek published a book outlining the major elements of the disease model of alcoholism.[4]

The major constructs underlying the disease model of alcoholism include seeing alcoholism as a primary illness, as a chronic disease, as a progressive disease, as an addictive illness, and as a fatal disease. These are elaborated in the following.

Alcoholism is a primary illness

About 90 percent of alcoholics seem to have problems which are a result of active drinking. Other alcoholics may have a dual diagnosis (e.g., alcoholism plus a psychiatric disorder). Primary alcoholism occurs when no pre-existing psychopathology has been observed; secondary alcoholism is seen when a person with a major psychiatric disorder develops the symptoms of alcoholism.

Alcoholism is a chronic disease

Those who have the disease are moved into a state of recovery through treatment, but they are never "cured" any more than an adult-onset diabetic is cured. The goal of treatment and aftercare is to promote longer and longer periods of sobriety. Returning to moderate or "controlled" drinking has not proven to be a viable option for primary alcoholics. The chronic nature of the affliction mandates careful follow-up and follow-through when working with alcoholic patients and their families. Relapses are common.

Alcoholism is a progressive disease

As long as the alcoholic continues to drink, the symptoms of the disease and his physical, social, and psychological problems will become more severe.

Alcoholism is an addictive illness

It meets all the criteria for diagnosis, including the involvement of individuals other than the patient in the addictive process. The addictive nature of the disease is easily recognized when the physician observes that, in spite of all the negative consequences which result from alcohol intake, the alcoholic continues to drink.

Alcoholism is a fatal disease

Treated, alcoholism can be controlled, and patients recover; left untreated, alcoholism has a very high mortality rate. Common complications are included in Appendix G.

The five classical stages of alcoholism are (1) normal drinking, (2) preoccupation with drinking, (3) preoccupation with controlling drinking, (4) preoccupation with stopping drinking, and (5) total abstinence.

To better depict the natural history of alcoholism, Whitfield has devised a five-stage pattern.[1] This includes:

Stage 1. Normal Drinking—The individual drinks alcoholic beverages without negative physical or emotional consequences. There is no preoccupation with drinking, and there are no efforts to control alcohol intake.

Stage 2. Preoccupation with Drinking—The person is pleased with his drinking behavior and believes that alcohol makes life better. He often thinks about drinking (what, where, when, etc.).

Stage 3. Preoccupation with Controlling Drinking—The drinker is trying to return to Stage 1. His attempts to cut down or to stop drinking usually result in repeated failures.

Stage 4. Preoccupation with Stopping Drinking—This stage is characterized by alternating periods of drinking alcohol and periods of total abstinence. When the alcoholic is in treatment and beginning the process of recovery, these occasional short relapses can be expected for up to five years.

Stage 5. Total Abstinence and Improved Coping With the Stresses of Everyday Life—Most alcoholics move into this final stage only after participating in some form of treatment. The individual is now enjoying a more productive, satisfying life with improved emotional and physical health.

With the same intention in mind but from a different perspective, Johnson used four stages to describe changes

in behavior.[5] As presented in Figure 1-2, these include:

Stage 1. Learning the Mood Swing—The drinker learns that ingesting alcohol makes him "feel good" and consistently shifts his mood from normal toward euphoria. After the effects of alcohol wear off, the drinker is back where he started—in the "normal" range.

Stage 2. Seeking the Mood Swing—The drinker has learned that alcohol can be counted on to improve his mood. So, when life is not going well or when he wants to celebrate a special occasion, he knows alcohol will make life better. The individual controls the amount of alcohol he drinks and experiences no problems.

Stage 3. Harmful Dependence—Now the results of drinking alcohol are not always pleasant. The drinker does not return to "normal"; he moves down the continuum toward "pain." This may include such things as a hangover, feeling embarrassed about his behavior, or other negative consequences. At this point, some people will decide to change or stop their alcohol intake, while others are not willing to stop using alcohol to alter their moods. Heavy drinking continues, and there is an increased discrepancy between what is expected to happen and what does happen. The drinker copes with this by developing defenses, by denying his emotions, by twisting reality, and by rationalizing. Problems with significant others increase, and a negative self-image often develops. The drinker relies even more on alcohol to relieve all these negative and uncomfortable feelings.

Stage 4. Drinking to Feel Normal—By now the drinker is in chronic pain; he drinks to feel normal! He is constantly at the negative end of the mood continuum, and he hopes that drinking will improve his mood to achieve a "normal" feeling state. The alcoholic's functioning continues to deteriorate, and his alcohol intake results in problems in most areas of life.

MacDonald suggested a "zero-stage" to precede those suggested by Whitfield and Johnson. He labeled it *Stage 0: Curiosity in a "Do-Drug" World.*[6] That is, in our chemical society, there are many inducements to use alcohol and other drugs. Adolescents are especially susceptible because they are normally curious, are willing to take risks, and want to be accepted by their peers. So the adolescent makes a conscious decision to leave "Stage 0," when he decides to move into Stage 1: Learning the Mood Swing. Of course, no one can predict the consequences of that decision; no one can say whether or not the adolescent will become addicted. However, one thing is certain: it will not be the nonuser.

Even though experts in the field of alcoholism differ in their definitions of the stages of alcoholism, all agree that use is a progressive process and the younger the user, the greater the possibility that he will move on to the final stages of alcoholism. Adult men may be "social drinkers" for 20 to 30 years before losing control and creating problems for themselves and their families. In women, the total natural history may be shorter. Interestingly, children and adolescents can begin drinking and move into the last stages of the disease-process within one to four years.

Adolescents as Alcoholics

It has been difficult for professionals in the alcoholism field to define and conceptualize problem drinkers who are adolescents.

One method of conceptualizing adolescent involvement with alcohol has been to identify adolescents who are heavy drinkers and/or adolescents who use alcohol and have other problematic behavior. Heavy drinking is usually defined as drinking a large quantity of alcohol at least once a week.

When researchers apply the term "alcoholic" to adolescents, usually one of the following criteria has been used:

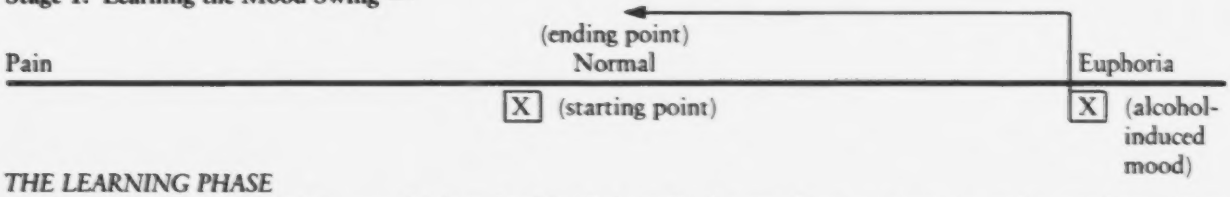
- the adolescent was a patient in an alcoholism treatment center,
- the adult diagnostic criteria were used, or
- psychological measures which are used to diagnose adult alcoholics are used to define the adolescent alcoholic.

Other experts debate whether alcoholism (as defined by Jellinek[4]) ever occurs in adolescents, citing the need to be cautious about fitting adolescents who drink into the existing framework of alcoholism as seen in the adult.

So we have a dilemma: how to accurately label the phenomenon that occurs when adolescents become harmfully involved with alcohol. There is still a paucity of research findings from which an empirical definition

Figure 1-2. Four-Stage Behavior Change Continuum Related to Substance Abuse Using Alcohol as an Example

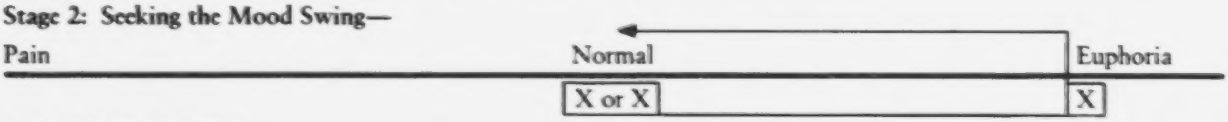
Stage 1: Learning the Mood Swing —



THE LEARNING PHASE

Drinker learns the mood swing—one drink makes him feel good—the mood swing is positive and rewarding—in an hour or two, he's back to "normal"—no emotional cost, no pain—this is experimental use—usually done with friends, on weekends, or during the summer—adolescents may experiment with beer, marijuana, and/or inhalants—may sneak beer, model glue, etc., from home—little use of "hard" drugs.

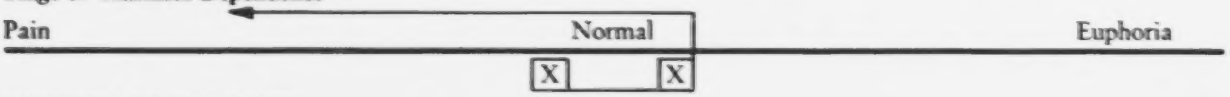
Stage 2: Seeking the Mood Swing—



THE SEEKING PHASE

Drinker begins to apply what was learned in Stage 1 to his social, cultural, and life situation—seeks the mood change, drinks to improve mood—expectation is that alcohol will make things better—no serious consequences, except occasional hangover—beer most popular, use of wine or liquor may increase—solitary use and use on week nights begins—may become preoccupied with use, planning next high, worrying regarding supply—may begin skipping school—parents notice change in behavior, youth "grounded" for late hours—starting to ignore nondrug-using friends—new (drug-using) friends are not introduced to parents—lying to parents regarding extent of use and amount of money spent—extracurricular activities are dropped, especially sports—grades go down.

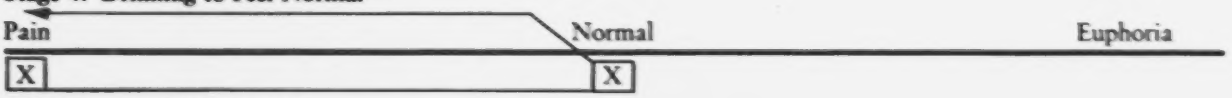
Stage 3: Harmful Dependence—



HARMFUL DEPENDENCY

There is a fine line between Stages 2 and 3—the positive effects of alcohol are now bringing some negative consequences—person is suffering losses due to drinking—occasional loss of control—begins to violate values and rules—develops defenses to help him continue his drinking (denial, rationalization, projection)—lying and hiding supply—lifestyle changes as life revolves around alcohol—consumption and tolerance increase—life is deteriorating (physical, mental, emotional, spiritual)—may be arrested for DWI—may try to quit to prove there is no problem—straight friends are dropped—parents do not know new friends—more trouble with school, parents, etc.

Stage 4: Drinking to Feel Normal—



USING TO FEEL NORMAL

Drinks just to feel "normal"—in chronic pain, no euphoria—many negative feelings—more blackouts—not meeting expectations of family, teachers, community—morning drinking—physical condition deteriorates—more tension, more guilt, but out of control, unable to stop—continued denial—low self-image—self hate—paranoia increases—cost of habit increases—family frustrated, angry, may give up.

of adolescent alcohol abuse can be established. This makes it all the more difficult for physicians to adequately assess adolescent alcohol use and its consequences.

Developmental Tasks of Adolescence

The age of adolescence varies and is lengthening as Americans spend more time in their educational years. Maturity issues abound in a variety of arenas.

Adolescence means "growing into maturity." It is the period during which a person changes from a dependent child to an independent adult. The individual is no longer a child but is not yet an adult. In the end, it seems more difficult to set the boundaries for adolescence than for any other period in the life cycle.

Many consider the onset of puberty to be the beginning of adolescence; however, this age varies considerably in different children. In terms of beginnings, age thirteen is a commonly accepted age for claiming boys and girls to have begun adolescence. The question, "Where does adolescence end and adulthood begin?" is even more difficult to answer.

The period of adolescence is lengthening. In the United States today, adolescence seems to be prolonged into the 20's. Most youth attend high school; more than half go on to college; and some even continue their education into the late 20's, delaying economic independence. If one defines adulthood as beginning when one is responsible for his own actions, legally our youth leave adolescence at the age of 18. As individuals move through the different periods in the life cycle, there are specific tasks which must be mastered to move into the next period in a healthy manner. The developmental tasks of adolescence are:

Achievement of Physical Maturity

The achievement of physical maturity is usual in normal circumstances. Puberty begins earlier in girls, often as early as age 9. During adolescence, girls develop breasts and pubic hair, begin menses, and grow to their adult height. Boys experience growth of their testes, scrotum, penis, pubic hair, and in height, and a deepening of the voice.

Emancipation from the Family

Children usually enter adolescence very dependent upon their parents and other adults. They need to give up this dependence and substitute self-dependence, self-support, and freedom from parental control. This is often difficult for both parents and youth; but with parental understanding and assistance, the adolescent can grow away from the parental ties gradually and without any major or permanent emotional upheaval.

Achievement of Emotional Maturity

Emotional maturity means the individual's emotional tendencies and reactions are comparable to those of an adult. For example, the individual is not plagued by childhood fears and anxieties; can listen to criticism; can face emotion-provoking situations without losing self-control; can identify and express feelings; and can stabilize mood swings.

Achievement of Social Maturity

The period of adolescence is a time when peer relationships assume primary importance and supercede the influence of the family. In early adolescence, youngsters usually engage in social activities with friends of the same sex. There are often intimate and intense "chum" relationships which serve as a bridge to more mature socialization. During middle adolescence, friendships with the opposite sex become important and dating often begins. This brings new risks and anxieties. How to handle sexual feelings is a major concern. Adolescents struggle with issues of "how far to go," contraception, masturbation, and homosexuality. Youths have many questions and fears regarding their sexuality. Society often provides few answers and little guidance.

Development of Intellectual Maturity

The period of adolescence is a time of intellectual expansion and development. In school, youths discover that academic requirements and expectations have increased. They become capable of abstract reasoning. With this new cognitive ability comes a passion for "truth" and ideological causes.

Development of an Identity and Selecting a Suitable Occupation

Throughout childhood the self image shifts and develops, but by adolescence it takes a definite form. A clear sense of roles and self-concept needs to be achieved by the close of adolescence. Without a firm idea of "who am I?" the future tasks of adulthood, including occupation and marital choice, may be extremely difficult. Part of identity formation includes a decision about "what will I be?" The youth may need to compromise between idealistic possibilities and realistic limitations. Adolescents often find this decision difficult, and some

drift into adulthood with no apparent direction in their lives.

Acquisition of the Beginnings of a Philosophy of Life

During this period, young persons are examining values and concepts upon which they may build their adult lives. They are beginning to develop a philosophy of life. It will change as they continue to mature and experience life, but it is important for adolescents to begin this process.

The Adolescent in Today's Society

Today's adolescent is in a society where alcohol and drug usage is prevalent and acceptable.

Most contemporary adolescents living in American society are exposed to or are involved with the use of alcohol. Their use of alcohol and other drugs can no longer be seen as unusual, abnormal, or restricted to some small subgroup of "problem youth." The pattern of prevalences cuts across gender, ethnic, regional, and rural-urban lines. Surveys show that for a significant proportion of our youth, the use of alcohol is an accepted part of their lives.

Our children are growing up in a "do-drug" society.

Drug use and intoxication often appear to be socially acceptable. It is possible to change any sensation or situation which we find unpleasant by using a chemical "fix." Using chemical solutions for human problems is almost a cultural expectation. Children are taught to open their mouths and find relief. "Legal" drugs are available for most ailments and symptoms. Children grow up with vitamin pills, aspirin, and cough medicine. Their parents' medicine cabinets are full of "cures." The message they clearly get is, "There is a pill for any ill."

Mass media and the entertainment world often contribute to the Do-Drug messages our youth receive. Television, radio, magazines, and signs along the highway contain many pro-drug messages. For example, adolescents observe and listen to drug use, particularly adult drinking, being modeled and discussed as a natural and everyday event on prime-time television. Drinking is portrayed as a "social" activity with generally positive consequences. Often, alcohol is promoted as a key part of entertainment and athletic events. Thus, the message received from many beer and wine commercials is that drinking is an important part of any sport or leisure-time activity.

Drug use has largely been a part of the entertainment industry, the source of many of today's heroes. Many popular songs depict sex, drugs, violence, and protest as acceptable situations. Strained communications between parents and children often make discussion of the messages delivered improbable. Some adolescents even ignore the deaths of their heroes from drugs.

Adolescents are influenced by their peers.

The degree of peer pressure experienced by adolescents is debated by researchers; but it is commonly accepted that, as a child moves into adolescence, the family has less influence on the youth, and his peer group becomes increasingly important. Instead of benefiting from the wisdom of his parents and generations past regarding the use of alcohol, adolescents want to learn for themselves the pros and cons of alcohol use. A number of studies consistently reveals that alcohol drinking becomes more prevalent, frequent, or heavy as the extent of drinking among friends increases.

Drug usage among adolescents can serve as an informal "rite of passage" from childhood into adulthood.

Adolescents want to be "grown up," and one way to do this is to emulate adult behavior, such as drinking. Since drinking is seen as a badge of adulthood to many teenagers, they drink as a way of proving themselves. Several researchers suggest that many adolescents will later decrease or abandon the alcohol drinking behavior as they move into young adulthood. This process has been referred to as "maturing out."

Psychosocial research suggests that the use of alcohol and other drugs by adolescents is purposeful, goal-directed behavior rather than arbitrary or reflective of some youthful perversity.

Drinking can fulfill multiple goals which are a part of adolescent adaptation and development. For example,

using, alcohol may help the youth:

attain independence from parental control;

express opposition to adult authority and conventional society (whose norms and values are not shared by youth);

deal temporarily with anxiety, frustration, or failure;

gain admission to the peer group; or

have an opportunity for risk-taking (as the youth moves from his family into society, he tries new and more complex tasks and makes more independent decisions).

There is a pattern of personality characteristics and social behaviors associated with adolescent drinking which reflects psychosocial unconventionality.

Adolescents who are abstainers, who only drink occasionally, or who are not involved with alcohol until late teens tend to be more conventional. Abstainers tend to value achievement and success in school and have greater intolerance of deviant behavior. These adolescents, uninvolved with alcohol, more often have greater religiosity, greater involvement with parents, and friends who share their parents' values and who drink less. Youth who are harmfully involved with alcohol tend to be characterized by unconventionality; they tend to place lower personal value on academic achievement, value self-determination and autonomy from parents, and are more tolerant of deviance. They attach less importance to religion, have greater peer than parent orientation, harbor a more critical attitude toward conventional society, and are more apt to weigh the positive, rather than the negative, aspects of drinking heavily.

In the normal population, the ordinary process of growth and development tends to move most adolescents away from conventionality. However, this process seems more rapid in the adolescents who begin consuming alcohol at earlier ages.

The adolescent's alcohol use may be a part of a syndrome of problem behavior.

Although many researchers and clinicians believe that some drug experimentation may be a normal part of "growing up," studies show that adolescents who use alcohol and/or other drugs often have other problematic behavior (behavior that is considered inappropriate or undesirable by the larger society). There is a significant correlation between adolescent drinking and such problems as antisocial or delinquent behavior, aggression, precocious sexual behavior, poor school performance, higher school dropout rate, and problems with the family. As drinking increases, other problem behavior tends also to increase.

The heavy use of alcohol during the adolescent years often leads to psychosocial retardation.

All respected developmental psychologists stress the importance of adolescence. Great changes occur as youngsters attempt to master the various developmental tasks, and transition is made from childhood to adulthood. Drug use may interfere with this maturation process. The adolescent who is harmfully involved with alcohol often grows into an adult who has never learned the tools necessary for coping with stress and intimacy, for responsible decision-making, and for accurate reality testing. As the adolescent moves into young adulthood, repeated failures become a way of life because the individual gave more attention to alcohol use than was given to mastering those crucial developmental tasks of adolescence.

Every state has laws regarding adolescent drinking.

Since the early years of our nation's history, concern regarding the use of alcohol has resulted in the passage of various laws. Today there are numerous laws which are concerned in some way with the use of alcoholic beverages. They define exactly when, where, and to whom alcohol may be sold and where and how drinking may be done in public places.

The Family as a System

Since abuse of alcohol by one individual adversely affects the family system, it may be viewed as a family illness.

When an individual is involved with alcohol, his

drinking has a tremendous impact on those around him. His family becomes a part of the disease and an important factor in his recovery. Therefore, many now view alcoholism as a family illness.

The family is a system. Every system is composed of units or parts; in a family, these parts are the family members. The typical family is no longer seen as father, mother, and two children; instead, the "family" is seen as a group of individuals who are intimately involved in each others' day-to-day lives. This may include step-parents, step-children, foster families, other relatives, etc. Interestingly, an absent or deceased person may continue to be a part of the family system if that person exerts a strong influence on the functioning of the family.

The parts of the system are linked together in a particular way so that the system can accomplish a common purpose; in the family, the members are linked together by family "rules." Although these rules are not often stated, they determine the function of each person, the relationship between persons, their common goals, and how goals are to be reached. As each part of the family system is connected or bonded by the family "rules," when there is a change in any one part the entire system changes. This is an important concept when we think of the effect which one abuser of alcohol has on the family system.

The function of the family can range from healthy to dysfunctional. Harmful involvement with drugs by one family member can move the family closer to the dysfunctional end of the scale.

A family at any point in time can be plotted on a spectrum from healthy and nurturing to "average" to dysfunctional. Examining the extremes of the spectrum, it is important to recognize that healthy and nurturing families will not be problem-free. However, there is in and through the family members an atmosphere in which individuals like and even love each other, respect each other's qualities and abilities, and accept each other's faults. Such a family is trusting, supportive, and essentially secure, and might even be said to live more or less happily. At the other end of the spectrum is the dysfunctional situation. The problems in this family cause a lot of pain and insecurity. Members may show their pain by inappropriate anger, resentment, withdrawal, and perhaps becoming harmfully involved with drugs. While each family can be graphed on the nurture-dysfunction spectrum at any given time, it can move in either direction as a result of what is happening in the system. Interestingly, the family tends to move as a group, not as unrelated individuals.

When the family is healthy and nurturing, each member is free to feel and express a wide range of emotion. Conflict need not be avoided; problems can be talked over; family members listen to each other. If a family member errs, his mistake will be tolerated but he is held responsible for that behavior and lives with the consequences. The family is able to cope with pain and stress, to work through problems to some acceptable solution. In this kind of open, supportive system, each member will have self-esteem, respect, energy, and love.

When a family member becomes harmfully involved with alcohol or other drugs, the family can move toward dysfunction. Even though just one member of the family is abusing drugs, chances are that every other family member is becoming less healthy. Each member is playing some part in this malfunction, and each family member is needed to bring the family back to health.

The unhealthy family presents difficulties for each member. Members of such families usually play differing roles. Some include the enabler, the hero, and the scapegoat.

Living in a changing, distressed family and not being able to talk regarding what is happening is a difficult, painful experience. To survive and to preserve the family system, individuals hide behind artificial behavior patterns; often they take on roles which they hope will bring the family back into a state of equilibrium. As the family becomes sicker, their compulsive survival roles become more defined. Sharon Wegscheider-Cruse has identified five basic roles which are seen in virtually every alcoholic or highly stressed family.[7] These roles are:

The Enabler—As the drinker is becoming more unhealthy and irresponsible, the enabler will step in and protect him from the consequences of his behavior. The enabler is usually someone who loves the alcoholic or whose well-being is intimately linked to the drinker's

life. The enabler will lie and make excuses for the drinker, hide his mistakes, and give Monday morning alibis to his employer or teacher. As the disease progresses, the enabler will step in more often and with more elaborate protection, thus making it easier for the alcoholic to continue his destructive behavior.

The Hero—The hero is often the oldest child in the alcoholic family. The hero is helpful at home and successful at school or work. The hero feels it is a personal responsibility to bring hope and pride to the sick family. He brings a sense of worth to the whole family system. Sometimes he looks so perfect that he shows no signs of the stress he is experiencing; his pain rarely shows. But it is all an illusion; the hero also feels miserable.

The Scapegoat—This family member sees the hero as "special," better, and brighter than this individual could ever be. Regardless of how good or talented the family member is, he cannot compete with the hero. So he decides it is not worth trying so hard and withdraws from the family. Thus, his behavior becomes a reverse image of the hero. He gets attention by his negative behavior. He may run away from home, may abuse alcohol himself, or get into trouble at home or school. The result is usually disgrace to the family. He seems not to care regarding his family, but in reality he does—desperately.

The Lost Child—This is the child who senses tension in the family. No one explains what it is all about, and he is confused and hurt. He adapts to his painful situation by getting lost. He becomes a loner, taking care of himself and staying out of everyone's way. He is more comfortable by himself than in the middle of the family chaos, and that is all right with the other family members. A child who makes no demands is a welcome relief to all.

The Mascot—The mascot is often the youngest child in the family. By the time this child joins the alcoholic family, each member is busy playing his or her own survival role. The mascot feels alone and helpless. The family protects him by not telling him what is happening in the family. The child is sensitive to the stress in the family, but everyone is telling him that things are fine. This is very confusing and he becomes more anxious. Then he learns that showing off can release pent-up energy and get him some positive attention. So he resorts to clowning every time he feels stressed. The family willingly gives him this attention, glad to focus their attention away from their other problems for a while.

The Drinking Adolescent and the Family System

When an adolescent abuses alcohol, often a parent is the enabler, which creates even more problems for the family.

When an adolescent's drinking begins to cause problems for him and his family, one parent tends to become the enabler. He will make excuses for his child's actions and will blame the troubles on others. It is easy for parents, especially mothers, to be the enabler because for years she has been responsible for her child. She may find it difficult to release her child as he moves into adolescence and independence. When negative personality changes occur, she rationalizes the changes and denies the problems. The enabler is overprotective, thus prolonging the dependency of immaturity and aiding the progress of chemical dependency. She creates problems for herself, the child, and the entire family system. The other parent may respond entirely differently, blaming the child's problem on lack of structure at home or other family weaknesses. This method of dealing with the problem will probably also make things worse. Both parents become hurt and angry. The entire family is becoming sicker and more dysfunctional.

While all this is going on, the siblings are aware of the tension and anger in the home. The parents' attention is focused on the abusing adolescent, with little time or energy left for the other children. Discipline may be erratic and inappropriate. Attention-seeking behavior may increase. Siblings will notice that the alcohol-using child does not follow family rules, and they may be tempted to do the same. The abusing youth may offer alcohol and other drugs to his siblings, and they may be tempted to go along with him to gain his favor. As the illness progresses, the siblings' confusion and pain increase, and they will probably take on the survival roles previously discussed. The whole family will need to be involved in treatment to move them toward equilibrium and health.

Special Issues of Children of Alcoholics

People whose parent or parents had the disease of alcoholism are at great risk throughout their lives for numerous

health problems, including depression, suicide, fetal alcohol syndrome, delinquency, and alcoholism.

The children of alcoholics include anyone who was born to an alcoholic parent. That means not only infants, children, and teenagers, but also adults and the elderly. Their problems often are not resolved as they move from childhood into adulthood; in fact, many problems are passed on to their children.

The risk to these children begins before they are born. Fetal alcohol effects are seen in some children of alcoholic women. The alcohol in the mother's bloodstream crosses the placenta, enters fetal tissues, and can result in permanent damage (including cardiac problems, changes in bodily features, and mental retardation). Fetal alcohol syndrome (FAS) is a leading cause of mental retardation. Other behaviors associated with maternal alcoholism may also harm the fetus (falls, malnutrition, unstable emotional state).

The consequences of living in an alcoholic family can be very severe for the young child and adolescent. The most common problems seen in children of alcoholics are:

- School problems: absenteeism, temper tantrums, fighting with peers, trouble with teachers and with schoolwork, school drop-out.
- Emotional disturbances: the individual experiences greater difficulties in maintaining family and social relationships, emotional instability, and maladjustment to reality. One study shows that half of the children of alcoholics have emotional problems with feelings of guilt, shame, and anxiety.
- Depression and suicide: a study of teenage suicide found that 80% of these youths had alcoholic parents.
- Child abuse: this includes emotional, physical, and sexual abuse. The child may be left alone or under the care of siblings or neighbors. They are more vulnerable to physical and sexual abuse. One in four cases of child abuse occurs while the parent is under the influence of alcohol.
- Parental illness, divorce, or death: the child may have to experience the many illnesses of the alcoholic parent, the parent's confinement to a hospital or treatment center, or death of a parent. The divorce rate in alcoholic families is 11 times greater than normal.
- Hyperactivity: family studies suggest that about a quarter of hyperactive children have one or more alcohol-abusing parents.
- Delinquency and teenage pregnancy: common in alcoholic families.
- Alcoholism: children of alcoholics have two to four times the risk of developing the disease of alcoholism. These risks and studies about the genetics of alcoholism are discussed at length in the next two units of study.

Adolescents suffer numerous negative consequences when they are reared in alcoholic families. They often try to understand their parents' behavior and affirm their own values, but they find little support for this identity development. They are frequently required to assume parental roles. This may help them become achievers at school and work, but it may also teach them to take responsibility without considering their own needs and wants. They may lack time to socialize or do school work. Often the youth is ashamed or afraid to bring friends home. They usually have confused feelings regarding alcoholic parents (love and hate, resentment and concern). If these youths do not receive treatment and/or get involved in their own recovery programs, the same unhealthy family patterns tend to be repeated in the next generation.

The special problems of children of alcoholics have gone unnoticed until recent years. From the fetus to the elderly, these people face a myriad of physical and psychological problems. Researchers and physicians are now beginning to understand and identify the consequences of being in an alcoholic family and are exploring ways to help these individuals. These issues are of great importance for family physicians.

Summary

Alcohol abuse is a major health problem affecting adolescents of both sexes and every socioeconomic level. Although the adolescent suffers most of the psychological and physical consequences observed in the adult alcoholic, a more grave concern is the strong possibility that alcohol abuse will arrest the teenager's growth and development during those crucial formative years.

In 1956, the American Medical Association declared alcoholism a disease. This unit of study explained the major concepts in the disease model of alcoholism and briefly discussed other definitions and models of al-

coholism. The natural history of alcoholism provides a framework for evaluating the adolescent's abuse of alcohol and other drugs.

The physician can explore the adolescent's world if he understands the developmental tasks of adolescence and the youth's relationship to his peers, family, and society. It is also important to be aware of the special issues of children of alcoholics. The physician has numerous opportunities to improve the health of future generations by using specific skills and expertise to prevent, recognize, and treat adolescents' abuse of alcohol and other chemical substances.

Evaluation

There is an old saying in education that there is no better way to learn about a subject than to teach about a subject. Following this axiom, pursue one or more of the suggested activities below. These activities will assure that you fully understand the materials in this unit of study. As you prepare to make the presentation or to develop the materials suggested, consult with colleagues and alcoholism and substance abuse specialists to assure the quality of your work.

Activity Set 1: Prepare and make a presentation to students, residents, or practicing physicians on one or more of the following:

A. The various models of alcoholism, their strengths and weaknesses
B. The Disease Model of Alcoholism
C. The national problem of teenage alcoholism and drug abuse
D. Local trends in teenage alcoholism and drug abuse
E. Assessing personal habits and attitudes regarding alcohol and other substances
F. The natural history and etiology of alcoholism in adolescents and adults
G. The biopsychosocial milieu of teenage substance abuse
H. Family systems and substance abuse

Activity Set 2: Prepare one or more of the following sets of materials:

A. A fact sheet on teenage alcoholism and substance abuse for parents
B. A fact sheet on alcohol and drugs for adolescents
C. A listing of local resources for parents and adolescents
D. A guide for discussing the problem of teenage alcoholism to be used by student groups
E. A self-assessment packet to be used by physicians

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Appendix A

Prevalence (Percent Ever Used) and Recency of Use of Sixteen Types of Drugs (1984)
(Approx. N=15900)

	Ever used	Past month	Past year, not past month	Not past year	Never used
Marijuana/Hashish	54.9	25.2	14.8	14.9	45.1
Inhalants[a]	14.4	1.9	3.2	9.3	85.6
Inhalants Adjusted[b]	*19.0*	*2.7*	*5.2*	*11.1*	*81.0*
Amyl & Butyl Nitrites[c]	8.1	1.4	2.6	4.1	91.9
Hallucinogens	10.7	2.6	3.9	4.2	89.3
Hallucinogens Adjusted[d]	*13.3*	*3.6*	*4.3*	*5.4*	*86.7*
LSD	8.0	1.5	3.2	3.3	92.0
PCP[c]	5.0	1.0	1.3	2.7	95.0
Cocaine	16.1	5.8	5.8	4.5	83.9
Heroin	1.3	0.3	0.2	0.8	98.7
Other opiates[e]	9.7	1.8	3.4	4.5	90.3
Stimulants Adjusted[e,f]	*27.9*	*8.3*	*9.4*	*10.2*	*72.1*
Sedatives[e]	13.3	2.3	4.3	6.7	86.7
Barbiturates[e]	9.9	1.7	3.2	5.0	90.1
Methaqualone[e]	8.3	1.1	2.7	4.5	91.7
Tranquilizers[e]	12.4	2.1	4.0	6.3	87.6
Alcohol	92.6	67.2	18.8	6.6	7.4
Cigarettes	69.7	29.3	(40.4)[g]		30.3

[a]Data based on four questionnaire forms. N is four-fifths of N indicated.

[b]Adjusted for underreporting of amyl and butyl nitrites (see text).

[c]Data based on a single questionnaire form. N is one-fifth of N indicated.

[d]Adjusted for underreporting of PCP (see text).

[e]Only drug use which was not under a doctor's orders is included here.

[f]Adjusted for overreporting of non-prescription stimulants.

[g]The combined total for the two columns is shown because the question asked did not discriminate between the two answer categories.

From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*. Washington: National Institute on Drug Abuse, 1985, p. 21.

Appendix B

Trends in Lifetime Prevalence of Sixteen Types of Drugs

	Percent ever used										
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	'83-'84 change
Approx. N =	(9400)	(13400)	(17100)	(17800)	(15500)	(15900)	(17500)	(17700)	(16300)	(15900)	
Marijuana/Hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.3	58.7	57.0	54.9	-2.1
Inhalants[a]	NA	10.3	11.1	12.0	12.7	11.9	12.3	12.8	13.6	14.4	+0.8
Inhalants Adjusted[b]	NA	NA	NA	NA	18.7	17.8	17.4	18.0	18.8	19.0	+0.2
Amyl & Butyl Nitrites[c]	NA	NA	NA	NA	11.1	11.1	10.1	9.8	8.4	8.1	-0.3
Hallucinogens	16.3	15.1	13.9	14.3	14.1	13.3	13.3	12.3	11.9	10.7	-1.2
Hallucinogens Adjusted[d]	NA	NA	NA	NA	18.8	17.7	17.7	17.0	16.7	15.3	-1.4s
LSD	11.3	11.0	9.8	9.7	9.3	9.3	9.8	9.6	8.9	8.0	-0.9
PCP[c]	NA	NA	NA	NA	12.8	9.6	7.8	6.0	5.6	5.0	-0.6
Cocaine	9.0	9.7	10.8	12.9	13.4	13.7	14.5	14.0	14.2	14.1	-0.1
Heroin	2.2	1.8	1.8	1.6	1.1	1.1	1.1	1.2	1.2	1.3	+0.1
Other opiates[e]	9.0	9.6	10.3	9.9	10.1	9.8	10.1	9.6	9.4	9.7	+0.3
Stimulants[e]	22.3	22.6	23.0	22.9	24.2	24.4	32.2	35.6	35.4	NA	NA
Stimulants Adjusted[e,f]	NA	NA	NA	NA	NA	NA	NA	27.9	26.8	27.9	+1.0
Sedatives[e]	18.2	17.7	17.4	16.0	14.6	14.9	14.0	13.2	14.4	13.3	-1.1
Barbiturates[e]	14.9	14.2	13.6	13.7	11.8	11.0	11.3	10.3	9.9	9.9	0.0
Methaqualone[e]	8.1	7.8	8.3	7.9	8.3	9.3	10.6	10.7	10.1	8.3	-1.8ss
Tranquilizers[e]	17.0	16.8	18.0	17.0	16.3	15.2	14.7	14.0	13.3	12.4	-0.9
Alcohol	90.4	91.9	92.3	93.1	93.0	93.2	92.6	92.8	92.6	92.6	0.0
Cigarettes	73.6	73.4	73.7	73.3	74.0	71.0	71.0	70.1	70.5	69.7	-0.9

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

NA indicates data not available.

[a] Data based on four questionnaire forms. N is four-fifths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites (see text).

[c] Data based on a single questionnaire form. N is one-fifth of N indicated.

[d] Adjusted for underreporting of PCP (see text).

[e] Only drug use which was not under a doctor's orders is included here.

[f] Adjusted for overreporting of the non-prescription stimulants.

From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*. Washington: National Institute on Drug Abuse, 1985, p. 34.

Appendix C

Grade of First Use for Sixteen Types of Drugs, Class of 1984

Grade in which drug was first used:	Marijuana	Inhalants [a]	Amyl / Butyl Nitrites	Hallucinogens [a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants [b] (adjusted)	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes (Daily)
6th	4.3	1.3	0.6	0.1	0.1	0.3	0.1	0.0	0.2	0.3	0.4	0.2	0.1	0.2	10.4	2.9
7-8th	14.1	3.1	1.5	1.2	0.7	0.5	0.7	0.2	0.8	3.1	1.8	1.4	1.0	1.4	22.4	5.9
9th	13.6	2.7	1.7	2.3	2.0	1.3	2.3	0.4	2.3	8.9	4.2	3.2	2.6	3.3	23.6	5.1
10th	11.2	2.9	1.7	3.0	2.1	1.2	3.4	0.3	2.5	7.9	3.8	2.9	2.3	2.3	18.4	4.2
11th	7.3	2.0	1.3	2.6	2.1	1.0	3.0	0.2	2.3	4.9	2.1	1.5	1.6	3.1	12.0	2.3
12th	4.4	2.4	1.3	1.2	1.0	0.3	4.6	0.2	1.6	2.6	1.0	0.7	0.3	1.7	5.9	1.4
Never used	45.1	85.6	91.9	89.1	92.0	93.0	83.9	98.7	90.3	72.1	86.7	90.1	91.7	87.6	7.4	78.0

NOTE: This question was asked in two of the five forms (N = approximately 3700), except for inhalants, PCP, and the nitrites which were asked about in only one form (N = approximately 2800).

[a] Unadjusted for known underreporting of certain drugs. See page 18.

[b] Adjusted for overreporting of the non-prescription stimulants.

From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*
Washington: National Institute on Drug Abuse, 1985, p. 66.

Appendix D

Trends in Annual Prevalence of Sixteen Types of Drugs

	Percent who used in last twelve months										
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	'83-'84 Change
Approx. N =	(7400)	(15400)	(17100)	(17800)	(15300)	(15900)	(17500)	(17700)	(16300)	(15500)	
Marijuana/Hashish	47.0	44.3	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.8	-2.1%
Inhalants[A]	NA	3.0	3.7	4.1	3.9	4.6	4.1	4.3	4.3	5.1	+2.8%
Inhalants Adjusted[B]	NA	NA	NA	NA	8.2	7.8	8.0	8.0	8.7	7.9	+1.2%
Amyl & Butyl Nitrites[C]	NA	NA	NA	NA	4.3	3.7	3.7	3.6	3.6	4.2	+0.6
Hallucinogens	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.3	-0.8
Hallucinogens Adjusted[D]	NA	NA	NA	NA	12.8	10.6	10.1	9.3	9.2	7.9	-1.3%
LSD	7.2	6.9	5.3	6.3	6.6	6.3	6.3	6.1	5.9	4.7	-0.7
PCP[E]	NA	NA	NA	NA	7.2	6.4	5.2	2.2	2.6	2.3	-0.3
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.6	11.3	11.4	11.6	+0.2
Heroin	1.2	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.5	-0.1
Other opiates[F]	5.7	5.7	6.4	6.8	6.2	6.3	5.9	5.3	5.1	5.2	+0.1
Stimulants[F]	16.2	15.8	16.3	17.1	18.3	20.8	26.0	26.1	29.6	NA	NA
Stimulants Adjusted[F,G]	NA	NA	NA	NA	NA	NA	NA	20.3	17.8	17.7	-0.2
Sedatives[F]	11.7	10.7	10.8	9.9	9.9	10.3	10.5	9.1	7.9	6.6	-1.3%
Barbiturates[F]	10.7	9.6	9.3	8.1	7.3	6.8	6.6	5.5	5.2	4.9	-0.3
Methaqualone[F]	5.1	6.7	5.2	6.9	5.9	7.2	7.6	6.8	5.6	5.8	+0.2%
Tranquilizers[F]	12.6	12.3	12.8	9.9	9.6	8.7	8.0	7.2	6.9	6.1	-0.8
Alcohol	84.3	85.7	87.0	87.7	88.1	87.9	87.0	86.3	87.3	86.0	-1.3
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES: Level of significance of difference between the two most recent classes:
1 = .05, 2 = .01, 3 = .001.

NA indicates data not available.

[A] Data based on four questionnaire forms. N is four-fifths of N indicated.

[B] Adjusted for underreporting of amyl and butyl nitrites (see text).

[C] Data based on a single questionnaire form. N is one-fifth of N indicated.

[D] Adjusted for underreporting of PCP (see text).

[E] Only drug use which was not under a doctor's orders is included here.

[F] Adjusted for overreporting of the non-prescription stimulants.

From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*. Washington: National Institute on Drug Abuse, 1985, p. 55.

Appendix E

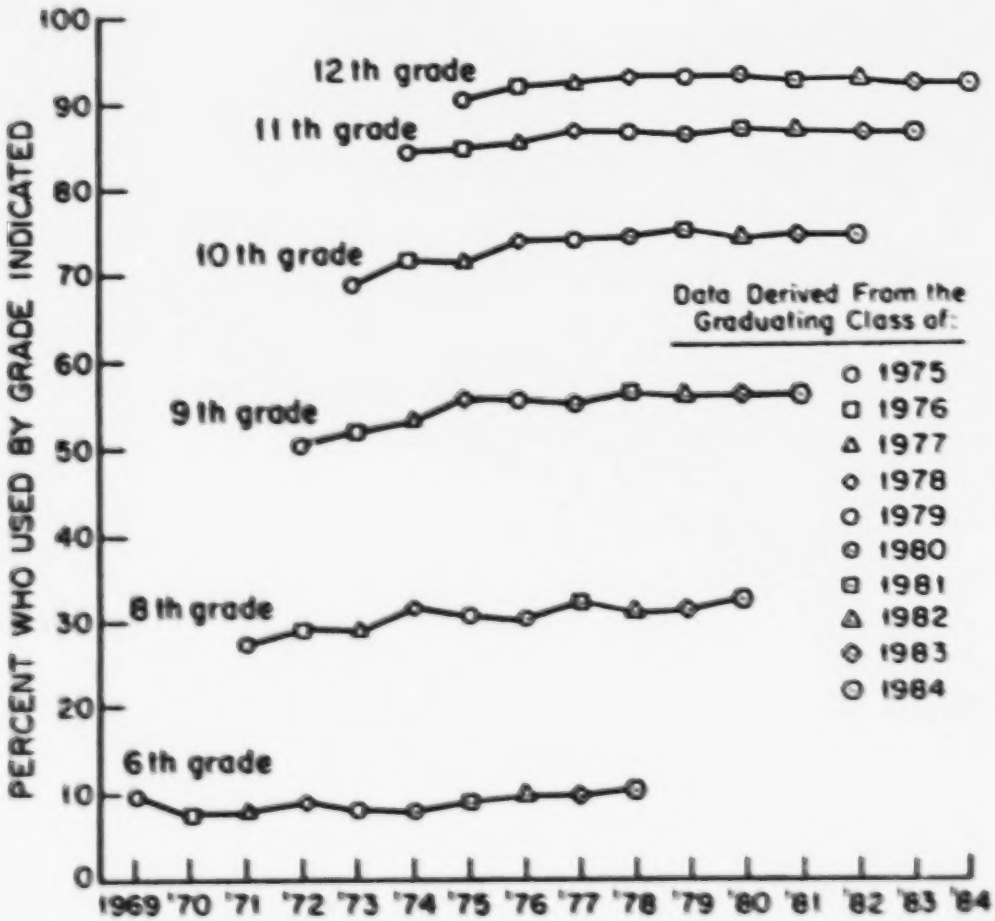
Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Cigarettes by Subgroups, Class of 1984

		Percent who used daily in last 30 days			
				Cigarettes	
	N (Approx)	Marijuana	Alcohol	One or more	Half-pack or more
All Seniors	15900	5.0	6.8	18.7	12.3
Sex					
Male	7600	7.0	6.6	16.0	11.0
Female	7800	2.5	2.7	20.5	12.8
College Plans					
None or under 4 yrs	5900	6.9	6.0	27.2	19.6
Complete 4 yrs	8900	2.9	3.6	11.9	6.5
Region					
Northeast	3200	7.5	6.5	23.6	17.4
North Central	4500	4.6	6.3	20.4	13.0
South	3900	4.1	5.3	17.7	11.3
West	2900	4.7	2.8	12.6	7.4
Population Density					
Large SMSA	6100	5.7	5.1	21.5	14.8
Other SMSA	6900	5.0	6.5	17.4	11.4
Non-SMSA	4900	4.6	5.1	18.2	11.5

From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*. Washington: National Institute on Drug Abuse, 1985, p. 31.

Appendix F

Alcohol: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors



From *Use of Licit and Illicit Drugs by America's High School Students: 1975-1984*. Washington: National Institute on Drug Abuse, 1985, p. 48.

Appendix G

Medical Complications of Alcoholism

Varicose veins of the esophagus: Liver damage causes a secondary increase in blood pressure in the veins of the esophagus. This pressure causes the veins to stretch and dilate. If the veins rupture, there is a grave possibility of death from internal hemorrhaging.

Cancer of the Esophagus: Due to an unknown chemical in alcoholic beverages, alcoholics have a higher incidence of cancer of the esophagus.

Gastric and duodenal ulcers: Alcohol is very irritating and causes an oversecretion of stomach acids and enzymes. This increased activity causes ulcers which may bleed, perforate, or obstruct food passage.

Gastritis: Heavy drinking causes serious inflammation of the lining of the stomach.

Pancreatitis: Alcohol is poisonous to the pancreas and causes inflammation which causes severe pain, nausea, vomiting.

Liver disease: Alcohol hepatitis, fatty liver, and cirrhosis are serious diseases and can be fatal.

Degeneration of the cerebellum: Chronic alcoholism can cause atrophy of the top portion of the cerebellum with permanent loss of coordination.

Neuritis: Alcohol has a poisonous effect on the nerves of the arms and legs; symptoms may be tingling, burning, numbness, paralysis.

Delirium tremens: Withdrawal from alcohol can cause tremors, sweating, nausea, confusion, hallucinations, and convulsions (may be fatal if untreated).

Impotency: Impotency can be caused by the depressant effect of alcohol or by neuritis, liver damage, or malnutrition.

Birth defects: These can include small brain and heart, cleft palate, retarded growth and development. This is because alcohol passes from the mother directly into the fetus.

Accidents: Alcohol is a contributing factor in many accidents, especially fires and automobile accidents.

Suicide: Alcohol is a factor in more than 60% of all suicide attempts.

Child Abuse: Excessive drinking is a major factor in a majority of child abuse cases.

Murder: Alcohol is implicated in more than 70% of all murders and other violent crimes.